ENVIRONMENTAL ASSESSMENT AND STATEMENT OF FINDINGS

1. Applicant: Cape Wind Associates, LLC

Application Number: 199902477

2. This permit action is being taken under authority delegated to the District Engineer from the Secretary of the Army and the Chief of Engineers by Title 33, Code of Federal Regulations, Part 325.8, pursuant to:

____X___ Section 10 of the Rivers and Harbors Act of 1899
_____ Section 404 of the Clean Water Act
_____ Section 103 of the Marine Protection, Research, and Sanctuaries Act

3. Description, location, and purpose of work: The project is to construct and maintain a Scientific Measurement Device Station (SMDS) consisting of a steel data gathering tower and an associated Acoustic Doppler Current Profiler (ADCP) to sit on the ocean bottom near the data tower on Horseshoe Shoal, Nantucket Sound. The SMDS and the ADCP structure is in a relatively shallow area outside of Massachusetts State waters on the Outer Continental Shelf. The data tower consists of three pilings supporting a single steel pile that supports the deck. The overall height of the structure is 197 feet (60 meters) above the mean lower low water datum. The entire data tower structure covers an area of ocean waters of approximately 900 sq. ft. Aviation and navigation safety lighting will be installed on the structure in accordance with FAA and USCG requirements. As currently proposed, the scientific measurement devices will consist of anemometers, vanes, barometers, and temperature transmitters on the tower. A wire to the data tower will connect the ADCP and the wire will be hand buried into the ocean bottom. This data tower is being requested by the applicant to provide site specific meteorological and oceanographic data they believe will be useful for the effective and efficient design, and construction of a proposed commercial (currently 170 turbines) offshore wind farm project. This offshore wind farm project is the first of its kind in North America. The entire data tower structure covers an area of ocean waters of approximately 900 sq. ft.

4. Description of general environmental setting: Horseshoe Shoal is a shallow open water area of Nantucket Sound between Cape Cod and Martha's Vineyard island. The waters at the location of the proposed data tower are approximately 13 feet deep. The site is outside of State of Massachusetts waters at approximately Latitude N 41° 28' 19.09064" and Longitude 70° 18' 53.29256", approximately six miles offshore. The ocean bottom at the site consists of a layer of fine to coarsely graded sands. There are three endangered species of marine turtles known to inhabit Nantucket Sound from June to November (the loggerhead, Kemp's ridley, and leatherback sea turtles) and two species of endangered birds, the roseate tern and piping plover, have also been observed in this area. Other marine mammals have been observed in the area. Nantucket Sound is used for both recreational and commercial fishing and boating. Surrounding land areas are popular tourist destinations and have large summer resident populations.

5. Functions and values assessment of resources impacted: The area is open water of 8 to 10 foot depth with fine to coarse-grained sands on the bottom. According to the applicant's studies the benthos on the seabed floor includes worms, insects, small clams, and other macro

invertebrates. The applicant has characterized the area as a highly productive area for benthic invertebrates. There are numerous fish species in the area. The area may be frequented by whales protected under the Endangered Species Act (ESA) and Marine Mammal Protection Act(MMPA), turtles protected under ESA, seals, porpoises and dolphins protected under the MMPA, roseate terns and piping plovers protected under ESA and various migratory birds protected under the Migratory Bird Treaty Act. Recreational and commercial fishing occur in the Horseshoe Shoals area and some recreational boating although the nearest navigation channel is more than one mile away.

6. Relationship to existing uses: Horseshoe Shoals is an open water marine environment providing habitat for marine species, and is used for recreational and commercial fishing and recreational boating. There are no other similar structures or devices in Horseshoe Shoals. However, there are navigation structures south of the Cape and there is a data tower south of Martha's Vineyard we permitted to Woods Hole Oceanographic Institute. There are numerous pile-supported piers along the shoreline which are similar construction but different location and purpose. This structure is not inconsistent with other pile supported structures in the marine environment in Nantucket Sound. The project will not impact existing uses of the area.

7. Alternatives:

The basic project purpose is to gather offshore meteorological and oceanographic data that will be used to assess the general and prevailing wind and wave conditions in Nantucket Sound as needed for the effective and efficient design and construction of a wind power project. This information is being collected to establish certain baseline information which may be used to support the environmental studies associated with the EIS / EIR (ACOE # 200102913), to evaluate optimal design conditions for a proposed offshore wind farm, and to acquire seasonal meteorological and oceanographic data for Nantucket Sound that does not presently exist. This information is not required for the wind power project EIS but may be used if available and relevant.

Land-Based Alternatives: In order to accomplish the purposes as stated above, in the most efficient and scientifically accurate manner, site-specific offshore data must be acquired. This cannot be accomplished using a land-based installation due to the differences in wind characteristics between onshore and offshore sites. Land based locations would not provide representative data for offshore conditions. Therefore a land-based structure was rejected, as not meeting the project's stated purpose.

Alternative Offshore Locations: The proposed location is centrally located within Nantucket Sound and will provide more area-specific information for the central and western regions of Nantucket Sound. Given what in our view are the minimal impacts from the SMDS and its construction, other sites in the Horseshoe Shoals vicinity would have a similar level of impacts. Locations closer to Monomoy and Tuckernuck were also considered, but were rejected because they were less likely to provide data that is representative of the entire Sound, and they are known to be areas of higher avian and marine mammal activity.

Alternative Technologies for Data Collection: Sonic Detection and Ranging (SODAR) technology was considered by the applicant as an alternative to the proposed tower-based anemometry instrumentation. The SODAR alternative was rejected for several reasons including:

SODAR does not provide the level of accuracy or reliability required.
SODAR systems are typically used for relatively short time periods to complement a tower-based program, and have not been used as the primary instrument in a marine based application.
SODAR has higher maintenance and power requirements than conventional tower-based programs.
SODAR observations are volumetric (with 10-20 meter resolution) rather than point-specific and would not allow for measurement of conditions at a variety of heights (20, 40 and 60 meters) as well as redundancy of instrumentation at each instrumentation level which can only be achieved with a tower-based program.

Tower Alternatives - Lattice vs. Monopole: The applicant investigated and originally proposed a taller lattice work tower at the same location. The structure height was originally proposed to be 263 feet above mllw. It was reduced to 197 feet mllw.

Fixed Tower versus Floating Tower: According to a report prepared by the Renewable Energy Laboratory at UMASS Amherst (Report - Task 4; Evaluation of Tower Options for Open Water Wind Resource And Wave Measurements; May 6, 2002) there are various floating structures capable of supporting data gathering instrumentation towers of 35 meters (115') or less.

Floating structures of various designs have been rejected as a viable alternative because it is technically infeasible to mount a tower capable of measuring data at 197' to such a structure and ensure that excessive motion will not cause the platform to capsize. The alternative of mounting the tower to a jack-up barge was investigated but not considered practicable based on the following:

Any barge-based application would need to be manned year-round over the course of the minimum 2-year data acquisition time period.
The jack up barge alternative was deemed to be cost prohibitive due to the cost of acquiring a barge through either purchase or lease, when the cost of labor is factored in. Based on CWA experience with the May 2002 avian radar barge deployment, the annual cost for leasing and manning a small jack up barge alone could exceed $525,000. This figure does not include the cost of the monopole tower or instrumentation.
The monopole tower design that has been determined to be the preferred design, would need to be guyed to the seabed for additional support if mounted on a jack up barge, and the guy wires would increase the potential for impacts to avian communities.
It was determined that mounting a monopole tower capable of measuring data at a height of 197' on the jack up barge would pose an unacceptable risk to the stability of the vessel, and therefore was deemed to be technically infeasible.

Fixed Tower Alternatives: In addition to the proposed 3-pile foundation structure, the applicant considered but rejected alternative fixed tower designs, including a larger monopile foundation, and a gravity foundation. Both the monopile and gravity foundations were rejected as being more expensive to install, and having greater environmental impacts to the seabed.

Using Existing Data Sets (No Action Alternative): According to the applicant and corroborated by the above-referenced UMASS report, one of the primary goals of the project is to be able to predict the wind speed and direction at what would be the hub height of the proposed wind turbines (262'). As stated in the UMASS report, "…it is necessary to measure wind speed and

direction at several different heights on a tower. The more measurement heights and the taller the monitoring tower, the more accurate the extrapolation …." The applicant contends that existing data does not exist that will satisfy its needs and the data to be gathered from the data tower will be more indicative of ambient conditions in Nantucket Sound in general. The additional data will be used to evaluate optimal design conditions for the wind turbine arrays at each of the alternative sites within Nantucket Sound, and will assist in gathering more site-specific data in the central and western portion of the Sound.

Applicant's Preferred Alternative : The monopole tower, mounted on a fixed 3-pile structure, at the proposed location on Horseshoe Shoal and utilizing conventional anemometry instrumentation at levels of 20, 40 and 60 meters was found to be the most scientifically accurate, cost effective, technically feasible and least impact alternative.

8. Impacts to public interest factors:

+ Beneficial - Adverse 0 Negligible Effect

0 Water Quality	0 Benthic Flora & Fauna
0 Land Use Classification	0 Water Supply and Conservation
0 Wetlands	0 Historical
0 Flooding	0 Drainage + Energy Needs
0 Economics	0 Circulation Patterns 0 Air Quality
- Esthetics	0 Erosion/Accretions - Noise
- Wildlife	0 Mineral Needs
0 Food and Fiber Production	- Navigation
0 Floodplain Values	0 Recreation
0 General Environmental Concerns	- Safety
0 Property Ownership	0 Other
+ Needs and Welfare of the People	

Description of impacts (including short term, long term and cumulative impacts):

Wildlife - any potential for impacts to endangered species are being mitigated by permit conditions recommended by Federal resource agencies. Other impacts to fish and wildlife species in the area are expected to be non-consequential due to the size and design of the project.

Esthetics - Day and night photo simulations were supplied by the applicant to demonstrate that the monopole of less than 200 ft in height and approximately six miles offshore will result in a barely discernable change in the seascape.

Needs and Welfare of the people + research institutions will have access to the data for improving our knowledge base of wind and ocean conditions in Nantucket Sound.

Noise - Underwater noise due to pile driving is not uncommon along coastal areas. However some marine mammals may be in this vicinity which could be affected if the levels are above 180 dBA. Conditions to avoid or minimize impacts have been included.

Navigation/Safety - minor obstruction to navigation mitigated by FAA & USCG approved lighting. The tower will be marked on new charts and is located in a shallow water area which should not be transited by larger vessels.

Energy Needs + data tower will help to determine if there is an adequate renewable energy source at this location and if it is feasible to use it commercially.

8. Findings:

a. State water quality certification: The state has concurred that water quality certification is not required for this project. The site is outside of the territorial sea and therefore Section 404 of the Clean Water Act is not applicable. Additionally there is no activity involved which would meet the definition of a discharge of dredged or fill material.

b. State coastal zone management concurrence: Even though this project is outside of State of Massachusetts waters, the State CZM office determined (by letter to us dated January 2, 2002) that the tower needed an individual CZM consistency determination. By letter dated January 18, 2002 MA CZM confirmed that federal consistency review had been initiated. Then, by letter dated May 16, 2002, the State CZM office determined that the "…activity is consistent with CZM enforceable program policies within the context of data collection to support the alternatives analysis…".

c. A public notice adequately describing the proposed work was issued on December 4, 2001 and sent to all known interested parties. It initially provided for our normal thirty day public comment period. In response to numerous written requests the public notice period was extended from January 4th until February 4, 2002. In response to numerous comments we received during the initial comment period a public hearing was held in Barnstable Town Hall in Hyannis on April 11, 2002 and another meeting on Martha's Vineyard on April 18, 2002 with the Martha's Vineyard Commission. The public comment period was extended until May 13, 2002 for further written comments. All comments received are noted generally below (in summary form) and have been evaluated and are included in our administrative record of this action including transcripts of the public hearings. The larger wind farm project with 170 turbines has generated considerable controversy and interest both for and against the project and is the subject of a separate permit process and federal EIS that is ongoing (Corps file # 200102913). That project is the first commercial scale offshore wind farm proposed for North America although there are a number of offshore wind farm projects in Europe. It is proposed for an area of Nantucket Sound visible from shore and in an area subject to other water related uses. Hundreds of electronic e-mail comments were received, dozens of written letters received, extensive oral statements given at two public hearings, and many newspaper articles were published. This permit decision is only for the single data tower but many of the comment letters and many of the oral statements at the public hearings commented not only on the data tower itself but also on the merits of the larger wind farm project. It seems as if most of those who commented on the data tower also wished to express an opinion on the larger wind farm project even though we tried to make it clear we were evaluating them separately. Comments submitted on the data tower only follow:

- the review of the data tower should be delayed until the EIS on the larger project is concluded, the tower itself needs an EIS, and we should evaluate both together;
- data to be gathered was too general, the methods for gathering it not clear and it wasn't clear how the data would be used for project permitting requirements;
- adequate data already exists or could be gathered by other means so the data tower was unnecessary and why did it need to be in the middle of Nantucket Sound;
- issues were raised regarding the life of the data tower and if a permit for the larger project is granted could the data monitoring devices be transferred to another tower or to the electrical services platform;
- the construction plan, materials to be used, methodology, impacts and staging area should be described;
- issues regarding maintenance, inspection, monitoring and response plans and needed onshore facilities;
- some contended the structure was a hazard to commercial navigation (including fishermen), recreational vessels, and aircraft navigation;
- a number of commenters raised issues regarding the removal plans and financial arrangements for removal in case the larger wind farm project is not approved;
- issues regarding shellfish and benthic resources at the site;
- visual impact issues;
- elimination of prime fishing grounds, Essential Fish Habitat, and interference with commercial fishing;
- issues regarding impacts of the tower on archaeological resources including coordination with the Wampanoag Tribe;
- the data should be for public benefit;
- issues regarding the impact of the construction of the tower on marine mammals including some endangered marine mammal species and potential violations of the Marine Mammal Protection Act and Endangered Species Act;
- issues regarding the effect of the tower and its lights on two endangered bird species in the area (the piping plover and roseate tern);
- issues regarding the applicant's lack of any property rights in the area since it is beyond the territorial sea limits on the outer continental shelf and consistency with MMS requirements.

i. EPA has not objected or commented on the data tower but is participating in the EIS on the larger wind farm project. NMFS indicated that during the proposed construction time period (September and October) there are endangered species in the area that they are responsible for protecting. As mentioned above, these species include the loggerhead, Kemp's ridley, and leatherback sea turtles. In response to our letter indicating that in our view there is not expected to be any effect on such marine species from the construction and retention of the data tower, the NMFS indicated that conditions are needed on the permit to ensure that there is no effect. A NMFS approved monitor will be present during pile driving and the sound monitoring data provided to NMFS to ensure that levels are below the 180 dBA level considered to be acceptable. We also advised the U.S. Fish and Wildlife Service that our view is that the project would have no effect on the roseate terns or the piping plover. In response to our letter, the U.S. Fish & Wildlife Service concurred, see letter dated July19, 2002. The F & W Service also recommended the use of acoustic monitoring to acquire data on use of the area by birds. The

applicant contends such data can be obtained by other means. We have not found any examples of acoustic monitoring having been used in an open ocean environment and could not have any confidence that it would be feasible and would yield useful information. Requiring such equipment will not avoid, minimize or mitigate any impacts. We will not require such equipment.

ii. Historic and Cultural Resources: As the site is located on the Outer Continental Shelf, the National Historic Preservation Act does not apply to the tower site. Our Public Interest Review does provide for addressing impacts to historic resources. No comments specific to the data tower were received from the Wampanoag Tribe of Gay Head. The MA Board of Underwater Archaeological Resources (BUAR) initially indicated that the area in question had "possible shipwreck presence" and was "an inundated land formation and as such there exists the strong possibility for the preservation of now submerged prehistoric cultural resources". The applicant did surveys of the Horseshoe Shoal area. The proposed location of the data tower was surveyed. Based on our analysis of the data, there is no indication of any archaeological artifacts in the area proposed for the SMDS. Based upon consultation with BUAR we are requiring through a permit condition that if the construction impacts extend beyond the area currently anticipated for the direct footprint of the structure, additional data collection will occur and results provided to us prior to the start of the work. Subsequent to a meeting with MHC, the applicant provided an analysis of the geophysical data currently available. This data does not indicate the presence of prehistoric cultural deposits within a depth accessible for any effective form of archaeological testing to identify the presence or absence of sites. The following permit condition addresses the MHC concerns:

> 16. In order to more completely assess the potential for archaeological resources within the area to be impacted by the construction of the data tower, additional geophysical survey data as described below shall be collected and provided to the Corps, Massachusetts Historical Commission, and the MBUAR no later than 20 days prior to the start of work for their review and comment within 20 days of receipt. The submittal shall be marked and sent in accordance with the instructions in Special Condition 3. This additional survey shall include the use of side scan sonar, magnetometer, sub bottom profiler (using 50 foot lane spacing covering a 500 foot by 500 foot area centered on the SMDS site, which could potentially be affected by construction equipment) and visual inspection of detected anomalies if a review by a qualified marine archeologist indicates that these anomalies may represent historic or prehistoric archaeological resources in the construction area.
>
> In the event that potentially significant historic or prehistoric archaeological resources are identified in the project area of effect, the Corps will consult with the MHC and MBUAR to avoid, minimize, or mitigate any adverse effects to National Register-eligible archaeological resources, prior to the commencement of construction.

There are unlikely to be visual impacts to land-based historic properties from this monopole structure, less than 200 feet in height and more than six miles offshore. The applicant provided day and night photo simulations which demonstrate that the tower and light will be barely discernible from the shorelines. Massachusetts Historic Commission has concurred that visual impacts would be unlikely.

d. General Evaluation: In response to the public notice there were hundreds of written comments received, both by letter and e-mail, and oral statements made at two public hearings. Of those in favor, the vast majority were in general support of the larger wind farm project and didn't specifically refer to the data tower itself.

The Cape Cod communities of Barnstable, Mashpee, Yarmouth and Nantucket have submitted written comments indicating that their communities voted and they are opposed to the larger wind farm project. None of communities raised any substantive specific objections or specific concerns relating to just the data tower.

Since the SMDS is outside of the State of Massachusetts' legal boundaries and waters, no other State of Massachusetts approvals are required except for the consistency determination under the Mass. CZM program referred to above. The larger wind farm project, which is being reviewed separately, will require a Federal EIS, a State EIR, and approval as a development of regional impact (DRI) from the Cape Cod Commission. It will also require various State approvals since the power generated must be transmitted to the electrical grid through transmission lines going under State waters and connecting to the uplands.

The single data tower itself, supported by three pilings, is of minimal impact and environmental effect. This type of construction is typical for piers along the coastline. The primary construction impact it will have is the underwater noise generated during the estimated 3 days it will take to drive the piles supporting the tower. There will be barges in place to construct the tower and the complete construction/installation of the tower will take approximately 8 to 10 weeks as currently estimated. Underwater noise can have an adverse effect on certain marine mammals that have been observed in Nantucket Sound at the time of year when construction is planned. Most of the adverse environmental impacts attributed to the data tower have not been substantiated and seem to have been generated by commenters concerned about the larger wind farm project that is the subject of the separate EIS and permit action.

Since this data tower is in an offshore area outside of the three mile limit on the Outer Continental Shelf there are a number of issues that have been raised by commenters that we have addressed through various special conditions of the Corps permit. These are bonding requirements, conditions explaining that the Minerals Management Service may have jurisdiction over these areas and stating that the Corps permit does not grant any exclusive rights or privileges.

Below is our analysis of the issues raised by the commenters.

i. Endangered Species (birds- roseate terns and piping plover) and Migratory Bird Treat Act: as indicated above, after consultation with U.S. Fish & Wildlife Service our view is that the single tower and its construction will have no effect on any such endangered species or on any birds covered by the Migratory Bird Treaty Act and we concur with the assessment on such species prepared by the applicant. U.S. Fish & Wildlife Service has concurred that it is not likely to adversely affect the endangered species.

ii. Endangered Species (marine mammals - loggerhead, Kemp's ridley, and leatherback sea turtles): as indicated above, after consultation with NMFS our view is that with the special permit conditions we are imposing on the permit to prevent any effects on any endangered species the single tower and its construction will have no effect on such species. NMFS has concurred with us that with the inclusion of permit conditions, that it is not likely to adversely affect the endangered species.

iii. Marine Mammal Protection Act: after consultation with the NMFS and after analyzing the assessment prepared by the applicant, we do not agree that the sound generated during construction and installation of the single tower will result in level (B) harassment of a

marine mammal and therefore a violation of the Marine Mammal Protection Act as contended by certain commenters. It was suggested that the applicant must apply for and obtain a "small take permit" under the Marine Mammal Protection Act. The commenters recommended additional information on marine mammals found in the project area for all months of the year. Implementation of the special conditions as recommended by NMFS should avoid or minimize impacts. In view of the minimal impacts of the project we do not feel additional studies are warranted beyond the information already submitted by the applicant. NMFS has agreed.

iv. Data tower project should be considered as part of larger wind farm project and not as an independent project: a number of commenters, including various attorneys commenting on behalf of opponents, contend that the data tower is a fundamental and inseparable part of the larger wind farm project. Their argument is that as a result the data tower must be reviewed as part of the larger EIS that is being performed for the overall project and a permit decision on just the data tower cannot be made separately. They further suggest that the data tower cannot be permitted without first completing the EIS for the entire project. In addition, some of the attorneys who commented cited specific cases they contend supported their arguments. They also point to the Corps regulations (33 C.F. R Part 325.1(d) (2)) that indicates that this should be evaluated with the larger wind farm because the purpose of the data tower is to gather data to be used in the design and engineering of the wind turbine facility. It was argued that as an integral component of the overall project, the tower forecloses any realistic consideration of reasonable alternatives. We do not agree with the commenters. This data gathering tower has independent utility for just the scientific data that will be gathered about wind, wave, and current conditions in Nantucket Sound provided the scientific data that is gathered is made readily available to the public in accordance with Special Conditions # 8 & 9 of the permit. Although the data is intended to be used by the applicant to assist them in the engineering design for the wind project, it is not mandated by any regulatory requirement. The data may support the wind farm but does not cause it to occur. The data tower is a separate project with independent utility. The applicant has proposed it as the best means to acquire site specific information for their use in determining whether the project is viable. The data tower does not meet the requirement of 40 CFR1508.25(a)(1)(i) because it will not automatically trigger other actions which may require environmental impact statements. The data from the tower may be used in the application for the wind power project but will not automatically trigger such a project. The EIS for the wind power project is already underway. With regard to 40 CFR1508.25(a)(1)(ii), the data tower and the wind power project are not projects which cannot or will not proceed unless the data tower is done previously or simultaneously. The data tower may be considered to be research or preliminary studies. The research data will also have some independent utility outside of their wind power project. Therefore the data tower and the wind power project may be considered separate and independent. With regard to 40 CFR1508.25(a)(1)(iii), the data tower should not be considered and independent part as it will generate data which may be used in the EIS, and to require an EIS to perform research to be used in an EIS would seem to trap the applicant in an endless cycle. The data tower and wind power project would not qualify as similar actions under of 40 CFR1508.25(a)(3). Similar actions are defined as those actions which “have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.” The only similarity between the two projects would be their geographic location, i.e. Nantucket Sound. The impacts from these two projects are not similar. The impacts from the single data tower are not significant whereas the impacts from the larger wind power project (170 structures) may be significant. For actions to be connected there must be more than mere relatedness or tangential association. The data tower will not have a direct and substantial probability of influencing the

Corps' decision on the larger project. The data tower will not restrict the consideration of other alternatives for the larger project. If similar data is required for other alternatives, additional data towers could be required where necessary. Currently there is no requirement for this data within the scope of the EIS. The Draft EIS is scheduled to be under review by the cooperating agencies prior to the data from the tower being available.

v. Construction and operation of the data tower is a "significant action" on its own requiring a separate EIS: the comment is that if we do not feel the data tower should be considered as part of the EIS for the larger wind farm project, the data tower on its own should be considered as an action significantly affecting the quality of the human environment thus warranting an EIS. The commenters suggested that the unique area of Nantucket Sound, the controversy surrounding the application, the unknown extent of the impacts on birds, the degree the permit may establish a precedent for future actions, the potential to affect historic properties, the cumulative impact of this permit action, the degree to which it will affect endangered or threatened species, and whether the action threatens violations of environmental protection laws. In our view, the construction and operation of this data tower is of minimal adverse impact and is not significant. There is precedent for this type of structure within Massachusetts's waters. A similar data collection structure has been authorized off Martha's Vineyard.

vi. Issuance of data tower permit is premature in the absence of comprehensive review of wind energy projects on OCS area off the New England coast: a commenter indicated that we should not issue the data tower permit until an analysis of offshore resources is prepared as recommended by the U.S. Fish and Wildlife Service in order to fulfill what the commenter contends is the Federal government's public trust responsibilities for administering this submerged land. We do not agree that there is a public trust duty upon the Corps in issuing this permit. We do not agree that there is any reason we should be prevented at this time from proceeding with our determination as to whether or not issuance of this permit is in the public interest. Since issuance of this permit does not have any effect on whether the applicant will ever get a permit for the larger wind farm project we do not need a comprehensive siting and environmental analysis for development of wind energy in New England.

vii. A cost-benefit analysis should be prepared because of controversy. We do not perform cost-benefit evaluations in permit evaluations. The Corps NEPA implementation regulations (33 C.F.R. Part 352 Appendix B 9. b. (5)(b)) provide that "…the Corps shall not prepare a cost benefit analysis for projects requiring a Corps permit". Also our regulations provide that when private enterprise applies for a permit it will generally be assumed that appropriate economic evaluations have been completed, the proposal is economically viable and is needed in the market place (33 C.F. R. Part 320.4 (q).

viii. Permit Issuance is inconsistent with State law. A number of commenters indicated that issuance of this permit in waters out beyond the three-mile limit and outside of State of Massachusetts waters was in violation of State of Massachusetts laws. We were informed, in writing, by the Massachusetts Department of Environmental Management that the area of Horseshoe Shoals where the data tower is located has not been claimed by the Commonwealth of Massachusetts as within its jurisdiction.

ix. Essential Fish Habitat (EFH) analysis needs to be done: in our view the impacts of the driving of the support pilings is a minor activity that will only impact the minimal area where the piles are to be driven. Pile driving is a routine construction activity in coastal waters and there are only minimal impacts to any habitat from it. NMFS has not objected to the application. Because of the minimal impact associated with pile driving we do not feel it may adversely affect essential fish habitat. Through our Public Notice, the District Engineer made a preliminary determination that direct, indirect and cumulative adverse effects of this

action to Essential Fisheries Habitat will be minor. NMFS has concurred that the activity will have no more than minimal adverse effects to EFH. NMFS has not provided any further conservation recommendations.

x. National Historic Preservation Act relating to visual impacts and ocean bottom resources/impacts: Since this project is on the outer continental shelf and is out beyond the 3-mile limit. Section 106 of the NHPA does not apply to this project site. However, we are applying the substantive criteria and as indicated above we have coordinated with the State of Massachusetts Board of Underwater Archaeological Resources and Massachusetts Historical Commission/State Historic Preservation Officer. As indicated above, the applicant has done extensive testing of the ocean bottom in the area of the data tower and a marine archeologist has analyzed this data. SHPO has concurred that no further survey or testing is feasible and that there are no affects to known historic resources such as historic districts.

xi. Need for tribal consultation: one commenter indicated we needed to coordinate with the Gay Head Wampanoag Tribe. On 18 April 2002, just before the public hearing on Martha's Vineyard, we met with a tribal representative to discuss the project. They were also in attendance at the public hearing. They have not expressed any concerns about the data tower and are being included as a cooperating agency in the EIS for the larger project.

xii. Data to be obtained too general and its use in permitting not clear: the data is to be used to evaluate wind, wave, tide and current conditions in the geographic area of Nantucket Sound and environs. Having on site technical data on these parameters is certainly preferable and since the adverse impacts of the tower are minimal we do not feel that requiring the applicant to pursue other alternatives is reasonable. This structure will provide detailed information about the meteorological and oceanographic conditions. The applicant indicated that they will use the data tower to evaluate the navigational and aviation lighting effects of the wind turbines.

xiii. Data available from other sources and why does it need to be in the middle of Nantucket Sound: as indicated above, this tower will be used to gather data for a wind farm in Nantucket Sound. This will allow the applicant to validate the efficiency and capacity of their preferred wind farm site, particularly the central and western regions of the Sound.

xiv. Life of the data tower and could the instruments be transferred to the electric service platform if the larger wind farm project is approved: We have conditioned the permit to require its complete removal within five years of the start of construction. At that point in time the data tower will not be needed by the applicant since by that time decisions on the wind power project will have been made. If the decision is not to allow the larger wind farm project in this location there will be no need for the data tower. If the permit for the larger project is granted and the electric service platform is built, the measuring devices, if needed, can be transferred to the platform or another tower. The data collected will continue to be useful to government and educational institutions. Five years allow for construction, three years of data collection and time to remove the structure.

xv. Describe the construction plan, materials, methodology and staging area: it is estimated that the piles for the tower will take 3 days to drive. Jack up barges will be used for construction with the most likely staging area being New Bedford. A pneumatic pile-driving hammer will be used. Once the piles are driven it is estimated to it will take approximately 8 to 10 weeks total time to construct the facility with approximately 6 weeks for in water work for the foundation piles and platform. The tower will be manufactured at the vendor's property and most likely shipped to New Bedford. A vendor has still not been chosen. The tower will be assembled on site. No anti-fouling agents will be used on the piles and no hazardous materials used in the construction of the tower.

xvi. Maintenance, inspection and monitoring issues: CWA expects to enter into a contract with a marine contractor based in Falmouth, Mass. to inspect the facility. CWA has contracted with Woods Hole Group, Inc. (WHG) of Falmouth to monitor and process the data and to maintain the equipment. WHG will store and process any spare instrumentation and no onshore facilities will be required.

xvii. Structure will pose a hazard to air navigation: the Federal Aviation Administration, in response to Cape Wind's application, issued a "Determination of No Hazard to Air Navigation" on December 19, 2001 after analyzing the impacts of the proposed data tower.

xviii. Structure will pose a hazard to vessel navigation: the permit will require that the structure will be lighted in accordance with U.S. Coast Guard requirements and could serve as a private aid to navigation. The structure will be at least one mile from the nearest navigation channel and will be located in relatively shallow water. The USCG has been notified of its location and design and raised no concerns. The applicant will need to obtain Coast Guard approval once the Corps permit is issued and will submit an application for a Private Aid to Navigation. The Steamship Authority indicated it does not have a problem with navigational issues concerning the tower because it is clear of the main channels.

xix. Removal and bonding plans in case the larger wind farm project is unsuccessful: we have required a substantial bond in the amount of $300,000 that must remain in place after the tower is removed so there is money available to remove any debris or remains that are discovered after removal including the removal of any debris that may fall off any vessel transferring the remnants of the structure to shore. We feel that is adequate to insure there is no financial burden on taxpayers in the event the larger wind farm project is never constructed. According to the applicant the structure can be easily disassembled and removed. The materials would be removed by barge and transported to shore. The steel piles would be cut and removed at a depth of approximately 6 feet below the seabed.

xx. Data should be for public benefit: the applicant has agreed to allow release of its data to governmental agencies and research institutions. We have included a special permit condition to ensure the information is available.

xxi: Elimination of prime fishing grounds and interference with commercial fishing: the tower will not interfere with commercial fishing or prime fishing grounds. The only area where fishing will be interfered with is immediately around and under the tower during construction. It will occupy just 900 square feet. The permittee has no exclusive use of the site.

xxii. Adverse impacts on shellfish and benthic resources on site: as mentioned above the only impact is on the small area where the piles are driven into the substrate and that is very minor and consistent with other pile supported construction activities in the coastal zone. The studies provided by the applicant indicate that the area where the data tower is to be placed is consistent with the ocean bottom areas throughout Nantucket Sound and consists of a normal amount and concentration of benthic invertebrates. There is not anticipated to be any further loss of habitat from this structure. The Corps has authorized thousands of pile supported structures and any impacts to shellfish have been inconsequential.

xxiii. No property interest or federal lease by applicant on seabed floor in Outer Continental Shelf Lands: Corps permits do not grant any property rights or guarantee exclusive privileges. The Corps also can and does reevaluate permit decisions if circumstances warrant and can either suspend, modify, or revoke authorization. Furthermore, our regulations (33 C.F.R. Part 320.4 (g) (6)) provide that the Corps should not enter into property disputes but should remind the applicant that the applicant's signature on the application is an affirmation that the applicant possesses the requisite property interest to undertake the proposed activity. The

regulations provide further that disputes over property ownership will not be a factor in the Corps public interest decision.

xxiv. Inconsistent with Minerals Management Service (MMS) authority over this area: this application was specifically coordinated with the Minerals Management Service as is the pending EIS for the larger wind farm project. The MMS is a cooperating agency for the EIS. The MMS has not raised any objection to this application and we have included a permit condition indicating that this approval does not have any effect over MMS authority over resources of the continental shelf. By letter of Jan. 4, 2002 MMS specifically said that they …"were not opposed to the installation of the tower.." However, they reminded us that they had jurisdiction over all mineral resources on the OCS and that the area proposed for the tower may contain sand resources subject to use for projects planned by the State of Massachusetts.

xxv. Premature to act since Congress is considering legislative changes which may affect this project: our regulations are very explicit in insisting that we proceed to final decisions on permits once we have "sufficient information to make a public interest determination…" The circumstances under which we should not or cannot make permit decisions are carefully set out but it is clearly our intent and the intent of Congress that we make timely decisions once we have sufficient information and all legal requirements have been met. Particularly in this case where it is pure conjecture about whether, or what, or when Congress may or may not pass laws concerning such offshore energy projects we should not wait any longer.

xxvi. Tower would not degrade the environment and has minimal environmental impacts compared to other activities: a number of commenters indicated that in their view the tower will have minimal environmental impacts and will not degrade the environment. We concur.

xxvii: Tower should be permitted immediately to aid in data gathering needed for environmental analysis and providing needed facts concerning wind potential of site: many comments in favor of the tower indicated that this data tower and the information it will provide will aid in gathering the necessary data needed to assess the suitability of the site for a wind farm and in assessing the impacts of the wind farm. We concur.

xxiii. Project inconsistent with federal "public trust" doctrine: we are not aware of any federal "public trust" responsibilities that are imposed on the Corps or that the Corps is required to administer. Our regulations provide for a "public interest review" (33 C.F.R. Part 320.4(a)) which entails assessing a number of factors. Furthermore, it is not clear to us, if there were such a doctrine, how it would be applied in a particular case. The "public trust doctrine" applies to the sovereign States when administering their public submerged lands within their territorial boundaries. Since the tower is beyond the territorial limits of any state the public trust doctrine would not apply to this project.

xxix. Sediment resuspension, and noise and vibration from the tower may affect fish species: We do not concur. The seabed area where the data tower is to be located consists primarily of sand. The pile driving will have only minimal impacts and will not resuspend any meaningful quantities of sand. Any such suspension will be minimal and short term. The tower will have minimal noise and vibration impacts.

xxx. There should be further public comment on the proposed EA/SOF (Environmental Assessment/Statement of Findings): Corps of Engineers NEPA implementing regulations do not provide any further opportunity for public comment, beyond the earlier public notice and public hearings, on a draft EA/SOF. Since in our view the applicant has fulfilled the necessary legal requirements and we have sufficient information to reach our public interest determination we have no reason to further delay the decision for additional public involvement.

The public will be informed of the availability of the EA and FONSI (Finding of No Significant Impact). Since impacts are minimal, the criteria of 40 CFR 1501.4(e)(2)(i)(ii) have not been met (action is without precedent; action would normally require an EIS).

e. The EPA regulations published as "General Conformity Rule" (58 FR 63214, November 30, 1993) to implement section 176(c) of the Clean Air Act for non-attainment areas and maintenance areas require that Federal actions, unless exempt, conform with the Federally approved state implementation plan. The impacts on air quality associated with the regulated activity described in this EA/SOF (work in or affecting navigable waters of the U.S. (Section 10 of the Rivers and Harbors Act) have been considered and are expected to cause only the minimal increase in emissions. Therefore, the regulated activity is exempt from the requirements of the General Conformity Rule.

f. The rationale for the Corps of Engineers limiting its scope of analysis to emissions associated with the regulated activity is based on the fact that it is not practicable for the Corps to control indirect emissions and the Corps has no continuing program responsibility over the entire activity.

g. I find that based on the evaluation of environmental effects discussed in this document, the decision on this application is not a major federal action significantly affecting the quality of the human environment. Hence, an environmental impact statement is not required.

h. I have considered all factors relevant to this proposal including cumulative effects. Potential factors included conservation, economics, esthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership and, in general, the needs and welfare of the people. After weighing favorable and unfavorable effects as discussed in this document, I find that this project is not contrary to the public interest and that a Department of the Army permit should be issued provided the applicant agrees to and complies with the conditions imposed.

_____ _____

DISTRICT ENGINEER DATE